Technical Data Sheet

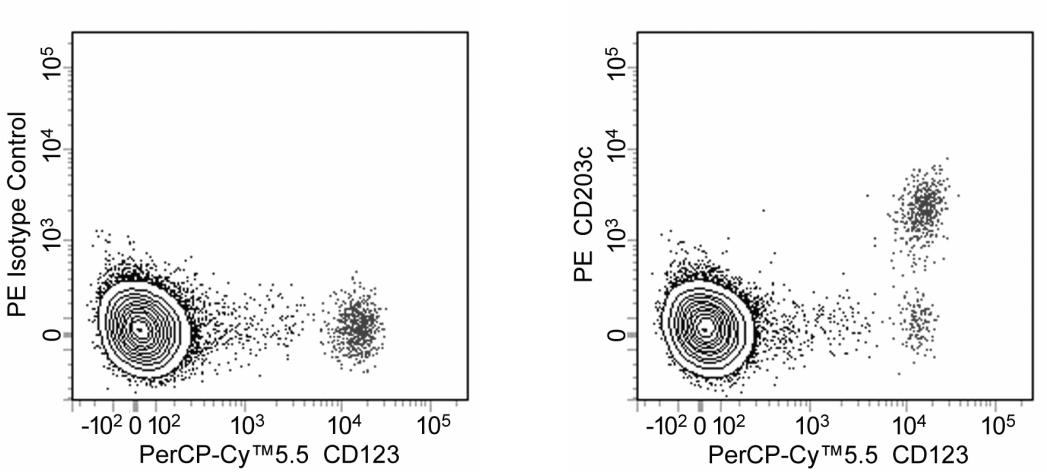
PE Mouse anti-Human CD203c

Product Information

Material Number:	**562972**
Alternate Name:	ENPP3; E-NPP 3; NPP3; PDNP3; PD-Ibeta; PD-1β; B10; NPPase; gp130RB13-6
Size:	50 tests
Vol. per Test:	5 µl
Clone:	NP4D6
Immunogen:	Human CD203c Transfected Cell Line
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

The NP4D6 monoclonal antibody specifically binds to CD203c. CD203c is a type II transmembrane glycoprotein that is a member of the E-NNP family of ectoenzymes. CD203c is also known as ectonucleotide pyrophosphatase/phosphodiesterase 3 (E-NPP3, ENPP3) due to its capacity to hydrolyze phosphodiester and phosphosulfate bonds in a variety of molecules including deoxynucleotides, nucleoside phosphates, and nicotinamide adenine dinucleotide. CD203c is otherwise known as Phosphodiesterase-1β (PD-1β, PD-I beta), B10, or gp130RB13-6. CD203c is expressed by basophils and mast cells. Basophils increase CD203c expression following activation with allergens or antibodies that crosslink cytophilic IgE. Thus, CD203c serves as a useful flow cytometric marker for basophil activation and the detection and analysis of type 1 allergic responses. IgE-receptor cross-linking results in CD203c upregulation and overexpression on neoplastic mast cells in cases of systemic mastocytosis.



Multicolor flow cytometric analysis of CD203c expression on human peripheral blood cells. *Human whole blood was stained with Mouse PerCP-Cy™5.5 Anti-Human CD123 antibody (Cat. No. 560904/558714) and either PE Mouse IgG1 κ Isotype Control (Cat. No. 554680; Left Panel) or PE Mouse Anti-Human CD203c antibody (Cat. No. 562972; Right Panel). Whole blood samples were then treated with BD FACS™ Lysing Solution (Cat. No. 349202) to lyse erythrocytes and fix the remaining leucocytes. The two-color flow cytometric dot plots show the correlated expression patterns of CD123 versus CD203c (or Ig Isotype control staining) for gated events with the forward and side-light scattering characteristics of intact lymphoid cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System. A target acquisition of at least 500 events with low side-light scatter characteristics and bright CD123 expression were included.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
554680	PE Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21
560904	PerCP-Cy™5.5 Mouse Anti-Human CD123	25 tests	7G3
558714	PerCP-Cy™5.5 Mouse anti-Human CD123	100 tests	7G3
349202	FACS Lysing Solution		(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

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Buhring HJ, Streble A, Valent P. The basophil-specific ectoenzyme E-NPP3 (CD203c) as a marker for cell activation and allergy diagnosis. *Int Arch Allergy Immunol.* 2004; 133(4):317-329. (Clone-specific: Flow cytometry)

Fureder W, Schernthaner GH, Ghannadan M, et al. Quantitative, phenotypic, and functional evaluation of basophils in myelodysplastic syndromes. *Eur J Clin Invest.* 2001; 31(10):894-901. (Biology)

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Hauswirth AW, Natter S, Ghannadan M, Majlesi Y, Schernthaner GH, Sperr WR, Buhring HJ, Valenta R, Valent P. Recombinant allergens promote expression of CD203c on basophils in sensitized individuals. *J Allergy Clin Immunol.* 2002; 110(1):102-109. (Clone-specific: Flow cytometry)

Hauswirth AW, Sonneck K, Florian S, et al. Interleukin-3 promotes the expression of E-NPP3/CD203C on human blood basophils in healthy subjects and in patients with birch pollen allergy. *Int J Immunopathol Pharmacol.* 2007; 20(2):267-278. (Biology)

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Iwamoto T, Yuta A, Tabata T, Sugimoto H, Gabazza EC, Hirai H, Kojima S, Okuda M. Evaluation of basophil CD203c as a predictor of carboplatin-related hypersensitivity reaction in patients with gynecologic cancer. *Biol Pharm Bull.* 2012; 35(9):1487-1495. (Biology)

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